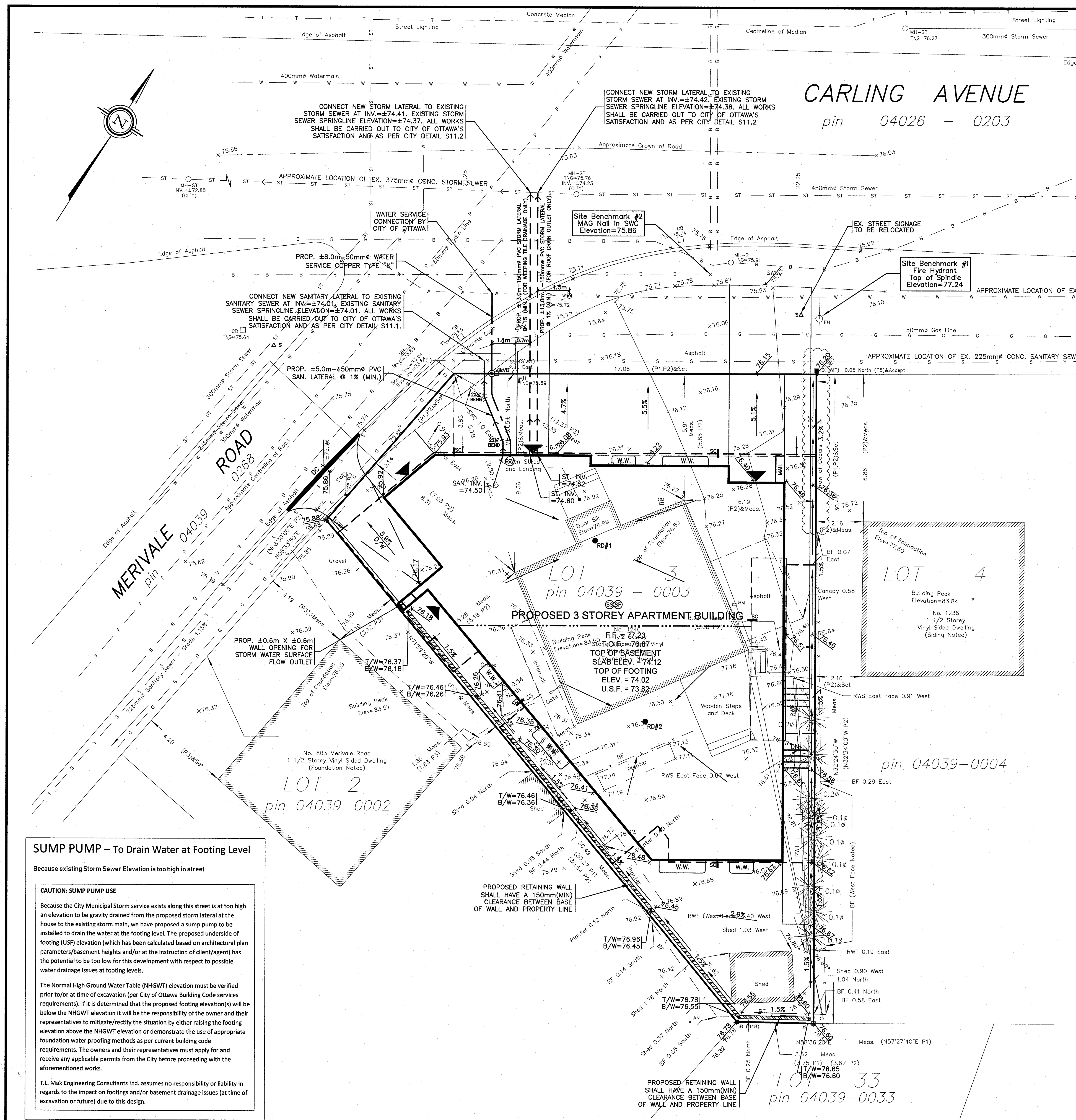


SUMP PUMP – To Drain Water at Footing Level

Because existing Storm Sewer Elevation is too high in street

CAUTION: SUMP PUMP USE

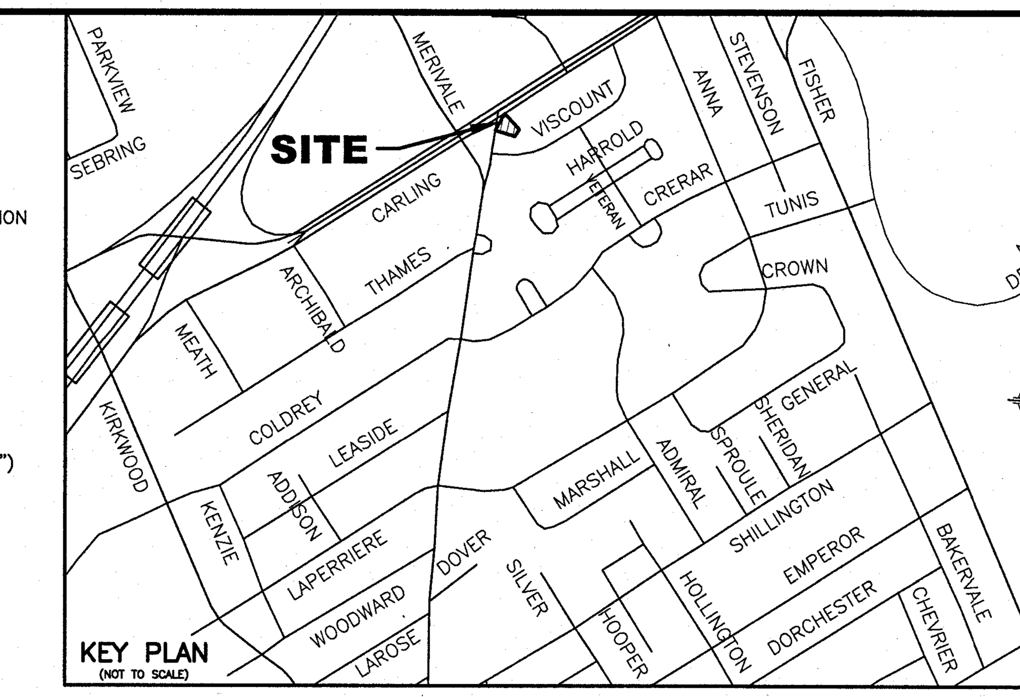
Because the City Municipal Storm service exists along this street is at too high an elevation to be gravity drained from the proposed storm lateral at the house to the existing storm main, we have proposed a sump pump to be installed to drain the water at the footing level. The proposed underside of footing (USF) elevation (which has been calculated based on architectural plan parameters/basement heights and/or at the instruction of client/agent) has the potential to be too low for this development with respect to possible water drainage issues at footing levels.

The Normal High Ground Water Table (NHGWT) elevation must be verified prior to/or at time of excavation (per City of Ottawa Building Code services requirements). If it is determined that the proposed footing elevation(s) will be below the NHGWT elevation it will be the responsibility of the owner and their representatives to mitigate/rectify the situation by either raising the footing elevation above the NHGWT elevation or demonstrate the use of appropriate foundation water proofing methods as per current building code requirements. The owners and their representatives must apply for and receive any applicable permits from the City before proceeding with the aforementioned works.

T.L. Mak Engineering Consultants Ltd. assumes no responsibility or liability in regards to the impact on footings and/or basement drainage issues (at time of excavation or future) due to this design.

LEGEND

Symbol	Description
76.22	PROPOSED ELEVATION
× 75.71	EXISTING ELEVATION
F.F.	PROPOSED TOP OF GROUND FLOOR ELEVATION
T.O.F.	PROPOSED TOP OF CONCRETE FOUNDATION ELEVATION
U.S.F.	PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION
D/W	PROPOSED DRIVEWAY
—S—	EXISTING SANITARY SEWER
—ST—	EXISTING STORM SEWER
—W—	EXISTING WATERMAIN
———	PROPOSED 150mmø PVC SANITARY LATERAL SERVICE @ 1% (MIN.) SLOPE
— — —	PROPOSED 150mmø PVC STORM LATERAL SERVICE @ 1% (MIN.) SLOPE
—-—	PROPOSED 50mmø WATER SERVICE (COPPER TYPE "K")
MH-S	EXISTING SANITARY MANHOLE
MH-ST	EXISTING STORM MANHOLE
CB	EXISTING CATCH BASIN
WV	EXISTING WATER VALVE
FH	EXISTING FIRE HYDRANT
UP	EXISTING UTILITY POLE
OHW	EXISTING OVERHEAD WIRES
V&VB	PROPOSED VALVE AND VALVE BOX (V&VB)
→	PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE FLOW
▨	PROPOSED RETAINING WALL
T/W	PROPOSED TOP OF RETAINING WALL ELEVATION
B/W	PROPOSED BOTTOM OF RETAINING WALL ELEVATION
● RD	PROPOSED ROOF DOWNSPOUT LOCATION
DC	PROPOSED DEPRESSED CURB
SP	PROPOSED WEEPING TILE SUMP PIT LOCATION C/W DUPLEX SUMP PUMPS (REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS)
SS	PROPOSED SANITARY HOLDING TANK LOCATION C/W DUPLEX SEWAGE PUMPS
SC	PROPOSED ROOF SCUPPER LOCATION
PRV	DENOTES PROPOSED PRESSURE REDUCING VALVE (SEE NOTE #42 ALSO FOR DETAILS)



KEY PLAN (NOT TO SCALE)

NOTES

1. EXISTING SERVICES AND UTILITIES SHOWN ON THIS DRAWING WERE TAKEN FROM THE BEST AVAILABLE RECORDS BUT ARE NOT COMPLETE. CONTRACTOR IS REQUESTED TO CHECK IN THE FIELD FOR LOCATION AND ELEVATION OF PIPES, UNDERGROUND STRUCUTRES AND CHECK WITH AUTHORITIES AND UTILITIES TO HIS SATISFACTION BEFORE DIGGING.

2. CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS AS DEEMED NECESSARY. REFER TO THE SITE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY THE OWNER'S SOILS ENGINEERS GEMTEC (PROJ No. 100382.003 DATED FEBRUARY 10, 2023) FOR DETAILS.

3. EXISTING HORIZONTAL AND VERTICAL SURVEY DATA SHOWN ON THIS PLAN INCLUDING GEODETIC SITE BENCHMARK, ROAD ELEVATIONS, SEWER INVERT ELEVATIONS AND THE TOPOGRAPHICAL INFORMATION OF THE LOT WERE PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. AS DEPICTED ON THEIR TOPOGRAPHICAL SURVEY PLAN (JOB No. 21221-20 COMPLETED ON FEBRUARY 1, 2021) RECEIVED ON APRIL 5, 2023. T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE. FOR DETAILS OF EXISTING SEWER AND WATERMAIN INFORMATION. THE CONTRACTOR IS RESPONSIBLE TO ASCERTAIN AVAILABLE CITY OF OTTAWA "AS-BUILT" DRAWINGS. ALSO, SEE PLAN AND PROFILE DWG. No. J-29-10 AND PLAN No. R-1000-71 SHEET 10 OF 11 FOR REFERENCES.

4. SITE LAYOUT AND DETAILS FOR GRADING AND SWM DESIGN WERE PROVIDED BY THE OWNER'S ARCHITECT S.J. LAWRENCE ARCHITECT INC. AS DETAILED ON THEIR SITE PLAN (SHEET No. A1.0 REV. No. 4 – JOB No. SL-1053-21) RECEIVED ON APRIL 5, 2023. BUILDING SECTIONS PLAN (SHEET No. A5.0 REV. No 7 DATED MAY 4, 2023) RECEIVED FROM THE ARCHITECT ON MAY 5, 2023 WAS USED TO ESTABLISH THE TOP OF GROUND FLOOR, TOP OF FOUNDATION. TOP OF BASEMENT SLAB, TOP OF FOOTING AND U.S.F. ELEVATIONS FOR THE BUILDING.

5. ALL GRADES SHOWN ARE GEODETIC AND METRIC (SEE ANNIS, O'SULLIVAN, VOLLEBEKK LTD.'S TOPOGRAPHICAL PLAN). ALL GRADING SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA.

6. PIPE SIZES SHOWN ON THIS PLAN ARE METRIC.

7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, LABOUR AND MATERIALS RELATING TO ALL CIVIL WORKS REQUIRED FOR THIS SITE AND BY THE CITY OF OTTAWA TO CONNECT INTO THE WATERMAIN.

8. CONNECTION OF THE 50mmø WATER SERVICE TO THE EXISTING CARLING AVENUE WATERMAIN SHALL BE BY THE CITY OF OTTAWA. EXCAVATION, BACKFILLING, AND RESTORATION SHALL BE CARRIED OUT BY THE CONTRACTOR. CONNECTION SHALL BE CARRIED OUT AS PER CITY OF OTTAWA DWG. No. W50 DETAILS. ALL WATERWORKS TO BE CONSTRUCTED TO THE CITY OF OTTAWA WATER ENGINEERING STANDARDS AND SPECIFICATIONS.

9. 300mm MINIMUM SEPARATION BETWEEN EXISTING WATERMAIN AND PROPOSED SERVICE LATERALS AS PER CITY STANDARDS. IF 300MM MINIMUM SEPARATION CANNOT BE MET, UNSHRINKABLE FILL SHALL BE USED.

10. CONSTRUCT ALL WATERMAINS, WATER SERVICES, SANITARY AND STORM SEWER SYSTEMS IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARD OTHERWISE AS PER OPSS REQUIREMENT AND DONE TO THE SATISFACTION OF THE CITY.

11. BEDDING AND HAUNCHING MATERIAL FOR SEWER INSTALLATIONS TO BE GRANULAR "A" INSTALLED AND COMPACTED AS PER CITY STANDARD DETAIL DWG. No. S6 AND S7.

12. STORM AND SANITARY LATERALS (150mmø) SHALL BE PVC DR-28 OR EQUIVALENT.

13. ALL WATER SERVICES/MAINS SHALL HAVE 2.4m COVER (min.). THE 50mmø WATER SERVICE SHALL BE COPPER TYPE "K" OR EQUIVALENT. WATER SERVICE AND WATERMAIN TRENCH DETAILS AS PER CITY OF OTTAWA W17 AND W22. THRUST BLOCK DETAILS ARE AS PER CITY DETAIL W25.3 DATED MAY 2001. FITTINGS SHALL CONFORM TO APPROVED AWWA AND/OR CSA STANDARDS. CATHODIC PROTECTION FOR NEW SERVICE AS PER CITY DETAIL W40 REV. DATE MARCH 2005.

14. IF WATER SERVICE IS LESS THAN 1.0m FROM SEWER, MANHOLE OR CATCHBASIN, CONTRACTOR IS REQUESTED TO INSULATE BETWEEN THEM WITH S/M RIGID INSULATION (SEE CITY DETAIL DRAWING No. W23).

15. STORMWATER MANAGEMENT NOTES:

- REFER TO PROPOSED ROOFTOP STORMWATER MANAGEMENT PLAN (DWG. No. 821-157 SWM-1) FOR ROOFTOP 2 YEAR AND 100 YEAR HWL.
- SEE STORM DRAINAGE REPORT No. R-821-157 DATED JUNE 2023 ALSO FOR DETAILS.
- CONTROLLED ROOF DRAIN MAXIMUM FLOW RATE FOR ROOF DRAIN #1 SHALL BE 0.95 L/s OR 15.0 US GAL/MIN.
- CONTROLLED ROOF DRAIN MAXIMUM FLOW RATE FOR ROOF DRAIN #2 SHALL BE 0.32 L/s OR 5.0 US GAL/MIN.

16. ALL PROPOSED BUILDING SANITARY, STORM AND WATER SERVICES SHALL TERMINATE ± 1.0m OUTSIDE THE FOUNDATION WALL AND CONNECTION TO PLUMBING BY OTHERS.

17. SANITARY BUILDING DRAIN TO BE EQUIPPED WITH A FULL PORT BACKWATER VALVE AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. STORMWATER DRAIN TO BE EQUIPPED WITH A BACKWATER VALVE AND INSTALLED AS PER CITY'S REQUIREMENTS.

18. PRIOR TO CONCRETE FOOTING AND FOUNDATION POURING, THE OWNERS AND/OR CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SUBGRADE ON THIS LOT IS SUFFICIENT TO SUPPORT THE PROPOSED BUILDING.

19. FOR DEVELOPMENT OF THIS LOT, THE CONTRACTOR MUST FIRST CONSTRUCT THE UNDERGROUND SANITARY, STORM AND WATER SERVICES FROM THE SEWER AND WATERMAIN TO SERVICE THE ENTIRE PROPERTY, PRIOR TO BUILDING CONCRETE FOUNDATION POURING. THE CONTRACTOR SHALL VERIFY SEWER DEPTHS TO ENSURE THAT SEWER LATERALS CAN ACHIEVE A SLOPE OF 1% (MIN.) AND STILL BE BELOW PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION, IF THIS IS FOUND NOT POSSIBLE, THE CONTRACTOR SHALL CONTACT THE OWNER TO REPORT THE FINDING IN ORDER TO ADJUST THE BUILDING FOUNDATION GRADES PRIOR TO CONCRETE POURING.

20. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, LABOUR AND MATERIALS RELATING TO THE CIVIL WORKS REQUIRED FOR INSTALLATION OF NEW SITE SERVICES. PROVINCIAL HEALTH AND SAFETY REGULATIONS MUST BE FOLLOWED DURING CONSTRUCTION.

21. IT IS THE RESPONSIBILITY OF THE SITE SERVICES CONTRACTOR TO OBTAIN AND CONSTRUCT THE WORKS TO MEET THE LATEST REVISIONS IN CURRENT CIRCULATION OF THE CITY OF OTTAWA'S ENGINEERING STANDARDS, OPSS AND OPSD STANDARDS, AND ONTARIO BUILDING/PLUMBING CODES. WHERE THE LATEST REVISION DIFFERS FROM THE REQUIREMENTS SET OUT IN THIS PLAN, THE CONTRACTOR SHALL PRICE THE WORKS TO MEET LATEST REVISED STANDARDS IN HIS PRICE BID FOR THIS PROJECT. THE CONTRACTOR SHALL INFORM THE ENGINEERS OF ANY CHANGES PRIOR TO COMMENCEMENT OF THE WORKS.

22. PROPOSED TOP OF ENTRY, TOP OF FOUNDATION, TOP OF BASEMENT SLAB, UNDERSIDE OF FOOTING ELEVATIONS SHALL BE REVIEWED AND APPROVED BY S.J. LAWRENCE ARCHITECT INC. PRIOR TO CONSTRUCTION.

23. IF EXISTING GRADES ALONG ANY EXISTING ABUTTING PROPERTY LIMITS EXCEED THE PROPOSED GRADES ON THIS PROPERTY BY A HEIGHT DIFFERENTIAL THAT EXCEEDS TERRACING OF 3H TO 1V, THEN INSTALL A RETAINING WALL AS PER OWNER'S REQUIREMENTS.

24. SITE SERVICING BEDDING, BACKFILL REQUIREMENTS ALONG WITH ROADWAY AND PARKING LOT PAVEMENT STRUCTURES SHALL MEET RECOMMENDATIONS AND REQUIREMENTS SET OUT IN THE OWNER'S SOILS ENGINEER'S REPORT. ALL WORKS TO BE CARRIED OUT BY THE CONTRACTOR ON THE PROPOSED ASPHALT ACCESS LANEWAY AND PRIVATE DRIVEWAY STRUCTURE SHALL BE APPROVED BY SOILS ENGINEER ON SITE PRIOR TO CONSTRUCTION.

25. THE EXISTING CONCRETE CURB ON CARLING AVENUE AND MERIVALE ROAD IF DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REINSTATED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.

26. THE CONTRACTOR, UPON COMPLETION OF THE NEW PARKING SPACE, SHALL RESTORE THE EXISTING MERIVALE ROAD ROADWAY BOULEVARD DISTURBED BY CONSTRUCTION WORKS ON THIS PROPERTY. ADDITIONALLY, THE ROADWAY GRADING SHALL BE RESTORED AND REGRADED TO DRAIN POSITIVELY TO EXISTING STORMWATER OUTLET AS REQUIRED BY THE CITY INSPECTOR.

27. CONSTRUCT DEPRESSED CURBING AND DEPRESS ANY EXISTING CONCRETE/ASPHALT SIDEWALKS FOR THE NEW DRIVEWAY ENTRANCE ALONG MERIVALE ROAD FOR DEVELOPMENT OF THIS PROPERTY IN ACCORDANCE WITH CITY OF OTTAWA ENGINEERING STANDARDS, REQUIREMENTS AND DETAILS PER CITY DWG. NO. SC13 DATED MARCH 2006. ALL WORKS SHALL BE CARRIED OUT TO THE CITY'S SATISFACTION.

28. CONCRETE BARRIER CURB AND DEPRESSED CURB DETAILS AS PER CITY OF OTTAWA STANDARDS (DWG. NO. SC1.1, MARCH 2007 AND SC6, MAY 2007). CONCRETE CURB AND CONCRETE SIDEWALK CONSTRUCTION AND REINSTATEMENT SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.

29. THE RETAINING WALL TO BE CONSTRUCTED AND MATERIAL TYPE SHALL BE SPECIFIED BY THE OWNER'S ARCHITECT AND/OR HIS STRUCTURAL ENGINEER. ANY RETAINING WALLS BUILT ON THIS LOT EXCEEDING 1.0m IN HEIGHT FROM PROPOSED FINISHED GROUND ELEVATION WILL BE REQUIRED TO BE PREPARED AND CERTIFIED BY THE OWNER'S STRUCTURAL ENGINEER AND APPROVED BY THE CITY PRIOR TO CONSTRUCTION.

30. CONCRETE PARKING PAVEMENT STRUCTURES SHALL MEET THE MINIMUM REQUIREMENTS AS SET OUT AS PER THE OWNER'S SOILS ENGINEER AND APPROVED BY THE CITY AND THIS STRUCTURE MUST ALSO BE APPROVED BY THE OWNER'S SOILS ENGINEER ON SITE PRIOR TO CONSTRUCTION BY THE CONTRACTOR. SITE SOILS ENGINEER SHALL APPROVE ALL ROAD SUBGRADE FROST TAPERING AND TRANSITION WORKS PRIOR TO GRANULAR PLACEMENT.

31. WHERE FROST COVER FROM UNDERSIDE OF BUILDING CONCRETE FOOTING TO PROPOSED FINISHED GROUND ELEVATION IS LESS THAN 1.55m, IT IS RECOMMENDED THAT INSULATION (50MM THICK) MINIMUM BE INSTALLED AT THE BUILDING FOOTING AND FOUNDATION TO PROVIDE SUFFICIENT FROST COVER FOR THE FOUNDATION STRUCTURES. THE FOOTINGS WILL NEED TO BE REVIEWED FOR INSULATION BY THE OWNER'S SOILS ENGINEER. EXACT INSULATION REQUIREMENTS SHALL BE AS PER ARCHITECT'S INSULATION DETAILS AS SHOWN ON THEIR ARCHITECTURAL DRAWINGS AND CONFIRMED BY THE OWNER'S SITE SOILS ENGINEER.

32. IT IS RECOMMENDED THAT A FULL PORT BACKWATER VALVE BE INSTALLED FOR THE SANITARY SERVICE LATERAL AND A BACKWATER VALVE FOR THE STORM SERVICE LATERAL PROPOSED TO SERVICE THE NEW BUILDING UNDER THE CURRENT REGULATION OF THE ONTARIO PLUMBING CODE AS PER CITY OF OTTAWA S14, S14.1 AND S14.2. THE OWNER'S ARCHITECT AND PLUMBER SHALL CHECK THE CURRENT ONTARIO PLUMBING CODE FOR REQUIREMENTS FOR A BACKWATER VALVE IN THE BUILDING AND AS PER THE MECHANICAL ENGINEER'S DRAWINGS AT THE SANITARY AND STORM SEWER SERVICE LINES.

33. EXISTING LATERALS AND WATER SERVICE PIPING HAVE BEEN AND/OR SHALL BE ABANDONED. THE WATER SERVICE SHALL BE BLANKED AND CAPPED AT THE MAIN AS PER CITY'S REQUIREMENTS. THE SEWER LATERAL(S) SHALL BE CAPPED AND/OR PLUGGED AT THE FRONT PROPERTY LINE. ALL WATER AND SEWER LATERAL WORKS SHALL BE CARRIED OUT TO THE CITY'S SATISFACTION.

34. a) THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE RECEIVING STORM SEWER DURING CONSTRUCTION ACTIVITIES. THESE PRACTICES ARE REQUIRED TO ENSURE NO SEDIMENT AND/OR ASSOCIATED POLLUTANTS ARE RELEASED TO THE RECEIVING WATERCOURSE. THESE PRACTICES INCLUDE INSTALLATION OF SEDIMENT BARRIERS ON ALL CATCH BASIN AND MAINTENANCE HOLES AND A SILT FENCE BARRIER (AS PER OPSD 219.110 AND ASSOCIATED SPECIFICATIONS) ALONG THE PROPERTY LIMITS OF THE PROPOSED DEVELOPMENT AND ALL OTHER AREAS THAT SHEET DRAIN OFF SITE. MAINTENANCE HOLE SEDIMENT BARRIERS TO BE AMOCO 4555 NONWOVEN GEOTEXTILE OR APPROVED EQUIVALENT.

b) THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

35. a) GIVEN THE ARCHITECTURAL REQUIREMENTS FOR THE PROPOSED BUILDING, THE UNDERSIDE OF CONCRETE FOOTING OF THE BASEMENT AREA IS BELOW THE PROPOSED SANITARY LATERAL INVERT WHICH OUTLET TO THE CARLING AVENUE SANITARY SEWER. THE OWNER'S ARCHITECT IS AWARE OF THIS CONSTRAINT. THE DEVELOPER AND HIS ARCHITECT WILL MAKE INTERNAL HOUSE PUMPING PROVISIONS TO PUMP SANITARY BASEMENT SEWAGE UP TO THE SANITARY LATERAL FROM A SANITARY SEWAGE TANK PUMPING SYSTEM FOR THIS BUILDING. LIKEWISE, WITH THE STORM PIPE/WEEPING TILE DRAINAGE SYSTEM, THE ARCHITECT WILL MAKE PROVISIONS TO PUMP THE WEEPING TILE WATER UP FROM A SUMP PIT AND/OR TANK COMPLETE WITH PUMPING SYSTEM IN ORDER TO DISCHARGE WEEPING TILE WATER TO THE PROPOSED 150mmø PVC STORM LATERAL THAT OUTLETS TO THE CITY STORM SEWER AT CARLING AVENUE. SEE LATEST REVISED ARCHITECTURAL PLANS FOR OUTLET LOCATION, DISCHARGE PIPE HEIGHT DETAILS, SEWAGE PIT/TANK SIZE, AND PUMPING SYSTEM FOR THIS BUILDING. IT IS RECOMMENDED THAT THE SANITARY SEWAGE TANK AND/OR STORMWATER SEWAGE TANK BE OVERSIZED. A DUPLEX PUMPING SYSTEM SHALL BE IN THE SANITARY AND STORM TANKS.

b) THE ARCHITECT AND OWNER'S/DEVELOPER'S MECHANICAL ENGINEER SHALL ENSURE THAT SANITARY SEWAGE FLOW FROM FLOOR LEVELS ABOVE THE BASEMENT LEVEL OF THIS BUILDING BE DIRECTED AND OUTLETTED TO THE PROPOSED GRAVITY FLOW SANITARY LATERAL PIPE AND NOT INTO THE BASEMENT SEWAGE TANK FOR PUMPING.

c) THE PROPOSED SANITARY SEWAGE TANK AND PUMPING SYSTEM ARE FOR DRAINAGE OF BASEMENT FIXTURES AND FLOOR DRAINS AS PER ARCHITECT'S DRAWINGS IN ACCORDANCE WITH THE LATEST REVISED ONTARIO BUILDING CODE.

d) SANITARY AND WEEPING TILE WATER SUMP PIT/TANK LOCATION AS PER ARCHITECT'S APPROVED BASEMENT FLOOR PLAN.

36. THE OWNER'S ARCHITECT SHALL INFORM THE OWNERS THAT AN ONGOING YEAR ROUND MAINTENANCE PROGRAM IS REQUIRED FOR THIS BUILDING TO ENSURE THAT THE SEWAGE AND WEEPING TILE WATER TANKS IN PARTICULAR SHALL BE ANNUALLY INSPECTED AND CLEANED IF NECESSARY. ALL PUMPS USED IN THIS BUILDING ARE TO BE DETERMINED BY THE OWNER'S MECHANICAL ENGINEER AND/OR PLUMBER BASED ON THEIR SPECIFIC USAGE UNDER THE PRESENT PLUMBING CODE AND CITY REQUIREMENTS.

37. THE HOUSE DESIGNER SHALL INFORM THE OWNERS TO HAVE AVAILABLE AT ALL TIMES A BACKUP GENERATOR ON STANDBY AT THE BUILDING IN THE EVENT OF A POWER BLACKOUT OR OTHER EMERGENCIES.

38. NO EXCESS DRAINAGE, DURING AND AFTER CONSTRUCTION, WILL BE DIRECTED TOWARDS THE NEIGHBORS' PROPERTIES.

39. ALL TREES ON THE RIGHT-OF-WAY ARE TO BE MAINTAINED BEFORE AND AFTER CONSTRUCTION AND ALL TREES WITHIN THE PROPERTY SHALL BE PROTECTED AS PER THE 'MUNICIPAL TREES AND NATURAL AREAS PROTECTION BY-LAWS' AND THE 'URBAN TREES CONSERVATION BY-LAW' AS AMENDED FROM TIME TO TIME.

40. THERE WILL BE NO ALTERATION TO THE EXISTING GRADE AND DRAINAGE PATTERN ON THE PROPERTY LINES.

41. INSULATE BUILDING SERVICE LATERALS AND STORM PIPES WITHIN PRIVATE PROPERTY AND ROAD RIGHT OF WAY WHERE GROUND COVER FOR FROST PROTECTION IS LESS THAN 2.4m FOR WATER SERVICE AND 2.4m FOR SANITARY AND STORM GRAVITY SEWERS. MINIMUM GROUND COVER OVER HOUSE SERVICE PIPES SHALL NOT BE LESS THAN 2.0m. EXACT INSULATION THICKNESS SHALL BE DETERMINED BY CITY INSPECTOR ON-SITE AND/OR OWNER'S SOILS ENGINEER. ALL INSULATION WORKS SHALL BE CARRIED OUT AS PER CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS DETAILS W22 AND W23.

42. INSTALL AN INDIVIDUAL PRESSURE REDUCING VALVE ALONG THE WATER SERVICE LINE TO THE PROPOSED APARTMENT BUILDING DUE TO POTENTIAL CITY WATERMAIN PRESSURE EXCEEDING 80 PSI.

NO.	REVISION	DATE	BY

LICENSED PROFESSIONAL ENGINEER
06/12/23
TONY L-M. MAK
PROVINCE OF ONTARIO

SCALE
0 1 3 5m
1:100 HORIZONTAL
VERTICAL

DESIGN	T.L.M.
CHECKED	T.L.M.
DRAWN BY	P.M.
CHECKED	T.L.M.
APPROVED	T.L.M.

PROJECT
1240 CARLING AVENUE
LOT 3
REGISTERED PLAN 267570
CITY OF OTTAWA

DRAWING TITLE
PROPOSED SITE GRADING AND SERVICING PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS

PROJECT No.	DATE	DRAWING No.
821-157	APRIL 2023	G-1